

20. The field emission cathode of claim 19 wherein said conjugated polymer material is a substituted polythiophene.

21. The field emission cathode of claim 19 wherein said conjugated polymer material comprises a polyalkylthiophene.

22. The field emission cathode of claim 19 wherein said conjugated polymer material comprises poly-3-octylthiophene.

23. The field emission cathode of claim 19 wherein said conjugated polymer material is formed as a polymer layer on a substrate.

24. The field emission cathode of claim 23 wherein said polymer layer is formed from a polymer solution including a solvent, which is distributed on said substrate, said solvent being evaporated to leave behind said polymer layer.

25. The field emission cathode of claim 24 wherein said solvent is evaporated under vacuum.

26. The field emission cathode of claim 24 wherein a surface of said polymer layer includes voids which are formed by solvent evaporation.

27. The field emission cathode of claim 24 wherein said surface of said polymer layer is shaped by use of a mould.

28. The field emission cathode of claim 27 wherein said moulded surface of said polymer layer comprises a plurality of projections which promote field emission.

29. The field emission cathode of claim 19 wherein said conjugated polymer material is doped with an electron donor material.

30. A field emission display comprising:

a field emission cathode comprising a conjugated polymer material forming a field emission surface;

a first anode separated from said field emission cathode such as to be capable of causing field emission therefrom;

a second anode positioned beyond said first anode; and

a luminescent screen, wherein electrons are selectively emitted from said field emission cathode under the influence of said first anode then accelerated onto said screen with sufficient energy to cause it to luminesce by said second anode.

31. A method of fabricating a field emission cathode comprising the step of forming a polymer layer comprising conjugated polymer material on a substrate, said polymer material forming a field emission surface of said field emission cathode.

32. The method of fabricating a field emission cathode of claim 31 further comprising the steps of:

distributing a polymer solution including a solvent on said substrate, and evaporating said solvent to leave behind said polymer layer.

33. The method of fabricating a field emission cathode of claim 32, wherein said solvent is evaporated under vacuum.

34. The method of fabricating a field emission cathode of claim 33 further comprising the step of shaping the surface of the polymer layer by use of a mould.